

NOTEBOOKS

FAQ

Q Will my Centrino laptop work with new wireless standards such as 802.11n?

A The 802.11n standard should provide wireless connections up to five times faster than 802.11g. However, it still hasn't been approved by the Institute of Electrical and Electronics Engineers (IEEE). The delay has resulted in a number of Draft-N routers and cards being released to fill the gap.

Intel has now announced the 4965AGN, a Draft-N PCI Express mini card. This should start appearing in new notebooks as soon as next month, and is one part of the new Centrino hardware platform, codenamed 'Santa-Rosa'. Draft-N routers labelled Connect with Intel Centrino will be compatible with the Intel card.

You should be able to upgrade most wireless notebooks to Draft-N by replacing your current wireless card. How easy this is depends on the design of your notebook. Alternatively you could buy a Draft-N USB or PCI Card upgrade. Our Labs test of wireless networks in next month's issue will help you choose the right one.

Seth Barton

Notebooks and video expert



seth@computersshopper.co.uk

ACER Aspire 3692WLMi

★★★★★

£430 inc VAT



Modern notebooks can be just as powerful as their desktop counterparts, so you can complete tough computing tasks on a computer that doesn't take over your entire desk. However, many notebook users need to perform only simple tasks such as web surfing, touching up the odd digital photo and watching DVDs.

The Intel Celeron M 430 in this Acer notebook runs at a respectable 1.73GHz. It's not dual-core, so it won't speed through video- or image-editing tasks like the latest Intel Core 2 Duo processors. It comes with 512MB of RAM, which is enough for day-to-day tasks. In our benchmarks, it performed similarly to many of the £700 notebooks we reviewed last year, and is quick enough for the kind of tasks most people do everyday.

This is the first notebook we've seen with Windows Vista Home Basic, which lacks the fancy 3D desktop and Media Center features of the Home Premium version. It also misses out on the notebook-specific features found in Windows Mobility Center.

The Aspire's 80GB hard disk provides enough storage for most uses, but you'll fill it quickly if you hoard big media files. If you want to clear some space, you can use the DVD writer to archive files to disc. There are plenty of ports for getting data in and out of the notebook. Four USB ports should be enough to handle any standard peripherals, while the memory card reader supports most common formats. Unfortunately there's no FireWire port, so camcorder owners should ensure they can use USB instead.

The 15.4in widescreen display will do a good job of showing videos and other content. It's bright and



has good contrast, plus a gloss finish to enhance the appearance of darker shades. Our colour wheel and greyscale tests didn't show up any major problems, so this notebook is fine for photo editing provided you don't open too many files at a time. A webcam above the screen means you can have video chats without a cumbersome clip-on camera. The built-in microphone and stereo speakers are fine for speech, but the speakers distort at their modest top volume.

We've used better keyboards than the Aspire's, which feels a little spongy. It's fine for everyday use, but you may want to use an external keyboard for

typing long documents. The touch pad is big and tracks accurately. It has decent buttons and a four-way scroll controller.

This notebook weighs a reasonably portable 2.8kg and is quite slim. Its battery lasted for just two hours and 22 minutes, however, so it isn't suitable for regular mobile use. Even so, it's a great budget notebook with an impressive specification for the price, and no major compromises. Best of all, you get a great display and useful extras such as a webcam. It's a worthy winner of our Budget Buy award.

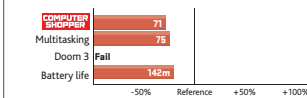
Seth Barton

SUMMARY

- ✓ Great display
- ✓ Very affordable
- ✗ Short battery life

NOTEBOOK 1.73GHz Intel Celeron M 430, 512MB RAM, 80GB hard disk, Intel GMA 950 graphics, DVD+/-RW +/-DL drive, 15.4in LCD widescreen, 2.8kg
PART CODE LX.AY70Y.036
SUPPLIER Laptops Direct 08701 670818
DETAILS www.acer.co.uk

PERFORMANCE (see page 54)



Also consider...

PC NEXTDAY Zoostorm 55-7701

★★★★★

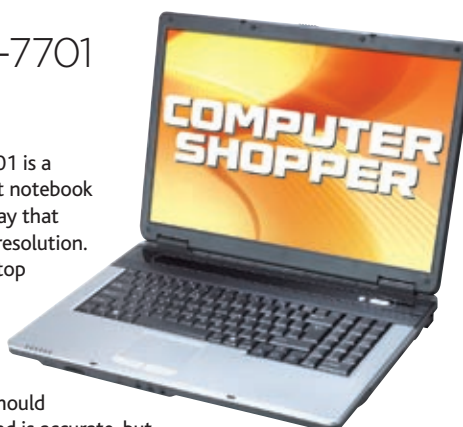
£919 inc VAT and delivery



PC Nextday's 55-7701 is a desktop replacement notebook with a big 17in display that supports a 1,440x900 pixel resolution. This provides plenty of desktop space for complicated or multiple applications.

The keyboard isn't the best we've used, so those who type long documents should look elsewhere. The touch pad is accurate, but most users will probably opt for a mouse with this kind of notebook. Inside there's a big 120GB hard disk, which provides lots of storage for large media files. The notebook has recently been updated and now comes with Windows Vista Home Premium installed.

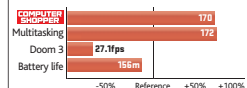
The Intel Core 2 Duo processor and 1GB of RAM helped the Zoostorm to a fantastic 170 in the



NOTEBOOK 2.16GHz Intel Core 2 Duo T7400 processor, 1GB RAM, 120GB hard disk, ATI Mobility Radeon X1600 graphics, DVD+/-RW +/-DL, 17in widescreen LCD
SUPPLIER sales@pcnextday.co.uk
DETAILS www.pcnextday.co.uk
PART CODE 3355-7701

- ✓ Powerful in Windows; TV tuner
- ✗ Average keyboard and battery

FULL REVIEW Jan 2007



Shopper benchmarks. With a dedicated 3D graphics chipset, it managed a playable 27.1fps in Doom 3.

Big notebooks aren't designed for everyday mobile use, and the Zoostorm's battery lasted only two-and-a-half hours in our test. However, if you need a powerful notebook for home use that won't cost the earth, this is ideal.

ASUS G2-17

★★

£1,599 inc VAT

Asus's G2-17 is a desktop-replacement notebook designed to appeal to gamers. It has plenty of design quirks, but little style. Its silver lid looks like metal but a quick tap reveals that it's plastic. Open it and you're assailed by a carbon fibre-like finish with details such as the speaker grilles on either side of the keyboard picked out in red. These speakers sound excellent, with sufficient volume and even some bass.

Those speaker grilles mean that, despite the width of the chassis, there's no space for a number pad. The keyboard is excellent, though, and comfortable to use. The W, A, S and D keys, which are used for most first-person shooters, are picked out with red lettering. We can't see why this would be useful, even to gamers.

The touch pad also has a carbon fibre look to it, and it works excellently. The buttons are integrated into the metal surround of the touch pad but they're still easy to reach. Between them is a circular logo of a menacing cartoon-style eye. This logo is repeated on the MX518 Logitech gaming mouse that comes with the notebook. It's a great mouse with adjustable sensitivity, and could go some way to improving your game scores.

The logo is repeated again on the bundled backpack, which is the only type of bag suitable for carrying a 3.9kg notebook. Even so, you wouldn't want to take the G2-17 on the road, as its battery lasted for a measly one hour and 49 minutes in our light-use test.

This notebook has every port you're ever likely to need, plus a proprietary connector for the hybrid TV tuner. You can connect an aerial to watch analogue or digital broadcasts, or use it to capture analogue video. The tuner works



with Media Center, which is included as part of Windows Vista Home Premium. There's a big 160GB hard disk with space for lots of video files and game installations, while a fast processor and plenty of memory help with tough tasks such as video editing.

Given the styling and price of the G2-17 we expected it to perform better in our Doom 3 test. It comes equipped with the new ATI Radeon Mobility X1700 graphics chipset, which proved only a little quicker than the ageing X1600. We tried our Call of Duty 2 test, but the G2-17 scored only 13.6fps. It can play the latest games, but only at significantly reduced detail settings.

The G2-17's display is easily its best feature. It's one of the brightest, sharpest and most colourful screens we've ever seen on a notebook. It's a pity that it supports a resolution of 1,440x900, however, as many notebooks at this price have 1,680x1,050 resolution displays.

Despite a high price and some garish, gamer-focused styling, the G2-17 isn't a fully fledged gaming notebook. It's a good all-round entertainment PC, but it's unreasonably expensive.

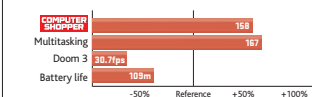
Seth Barton

SUMMARY

- ✓ Great display
- ✗ Disappointing 3D performance
- ✗ Expensive

NOTEBOOK 2.0GHz Intel Core 2 Duo T7200, 2GB RAM, 160GB hard disk, ATI Radeon Mobility X1700 graphics, DVD+/-RW +/-DL drive, 17in LCD widescreen, 3.9kg
PART CODE G2-17
SUPPLIER Mesh 08447 360440
DETAILS <http://uk.asus.com>

PERFORMANCE (see page 54)



BYTE SIZE

GENIUS Navigator 900

★★

£29 inc VAT



The Navigator 900 is a portable mouse that connects via Bluetooth, so you'll need a Bluetooth dongle if your PC doesn't have an onboard receiver. Installing the two AA batteries is simple: pressing a switch flips up the top half of the mouse, revealing a battery compartment.

The Navigator's tracking felt more jittery than other Bluetooth mice we've used. It's comfortable to hold for short periods, but it's too small for extended use. The buttons are responsive, but the scroll wheel feels loose, making it easy to scroll too far. If you need a portable mouse, we'd recommend Kensington's PilotMouse Bluetooth mini (*What's New, Shopper*, January 2006), which has smoother tracking and a better scroll wheel.

Alan Lu

SUPPLIER www.techfever.co.uk
DETAILS www.geniusnet.co.uk

GENIUS SP-i202U

★★★★

£22 inc VAT



These compact travel speakers from Genius connect to a computer via USB, and are supplied with a neat retractable cable. The connection handles power for the amplifier and the audio signal itself, but the speakers also have a line input. As long as you have a USB port or four AAA batteries to provide the power, you'll be able to connect an MP3 player or other portable audio kit.

The set comes with a zip-up semi-rigid case. Each speaker has a stand at the back, but they aren't very steady. Sound quality is surprisingly good, with a fairly rounded frequency response. As with all USB-powered speakers, the top volume is pretty modest, but this set is good value.

Simon Handby

SUPPLIER www.microdirect.co.uk
DETAILS www.geniusnet.co.uk

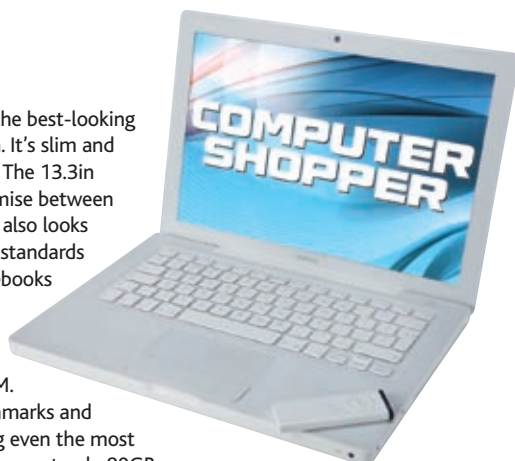
APPLE MacBook

★★★★★

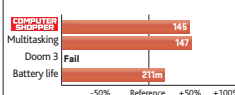
£879 inc VAT

The MacBook is possibly the best-looking notebook we've ever seen. It's slim and feels sturdily constructed. The 13.3in display is a good compromise between size and portability, but it also looks great: it's easily up to the standards of the best Windows notebooks we've tested.

Inside the system there is a fast dual-core processor and 1GB of RAM. It sped through our benchmarks and it is capable of performing even the most demanding of tasks. However, at only 80GB the hard disk is a little on the small side. The number and types of ports are also limited by the slender design; there are only two USB2 ports, for example, and there is no built-in modem, either.



NOTEBOOK 2.0GHz Intel Core 2 Duo T7200, 1GB RAM, 80GB hard disk, Intel GMA 950 graphics, DVD+/-RW +/-DL, 13.3in widescreen LCD
SUPPLIER www.apple.com/ukstore
DETAILS www.apple.com/uk
PART CODE MA700B/A
✓ Stylish chassis; great display
✗ Lacks many standard ports
FULL REVIEW Apr 2007



The touch pad is huge and accurate and the keyboard is generally good, but the Return key was a little too small for our liking. However, the MacBook has a long battery life, making it a great notebook for those wanting something both stylish and portable.

BYTE SIZE

BELKIN TuneCast II

★★★★★
£16 inc VAT



Belkin's TuneCast II FM transmitter might have 'for iPod' written on the box, but it works with any MP3 player with a mini-jack audio output. When not in use the audio cable wraps neatly around it.

The TuneCast II powers itself on from two AAA batteries when it detects an audio input, and powers down when you unplug it or turn off your MP3 player. There's a car power adaptor in the box, but it doesn't charge the batteries.

It's easy to select the FM broadcast frequency you want, and you can store up to four pre-set stations. Sound quality and range are both excellent. Rechargeable batteries would have been nice, but for £16 the TuneCast II is great value.

David Ludlow

SUPPLIER www.microdirect.co.uk
DETAILS www.belkin.co.uk

PC LINE PCL-FL1 Wired Laser Mouse

★★★★★
£15 inc VAT



PC Line's Wired Laser Mouse is a full-size USB mouse. It's fairly understated, with little to live it up other than the word laser, written across the top in a way that might remind older readers of a Ford Capri Special Edition.

The mouse is comfortable, with a shape that's wide enough to support the palm, but the two buttons are finished in dimpled plastic that feels odd. It works using laser light, rather than a more conventional LED source. It's so sensitive when scanning at 1,600dpi that we had to reduce the cursor speed in Windows. It's a good budget gaming mouse, but its looks won't impress many people.

Simon Handby

SUPPLIER PC World 08702 420444
DETAILS www.pcworld.co.uk

ROCK Pegasus 665

★★★★★
£1,049 inc VAT

Acer's Aspire 3692WLMi, reviewed on page 16, shows that even budget notebooks are fairly powerful these days. However, if you want a notebook that can race through tough tasks and play games as well, you'll still need to spend a bit more.

Many of the notebooks in this month's Labs test (see page 68) are capable of doing both to some degree but, at around £200 more, Rock's Pegasus 665 should outperform them all. With 2GB of RAM, its Intel Core Duo processor certainly made short work of our benchmarks. It's more than capable of taking on processor-intensive computing tasks such as video editing, but it was no quicker in Windows than the best notebooks in our Labs test.

Fortunately, the Pegasus combines good Windows performance with reasonable 3D power, thanks to its Nvidia GeForce Go 7600 graphics processor. It's the best of the affordable mobile chipsets, but you may find you have to compromise graphical detail to get some games running at smooth frame rates.

Whether you're editing video or playing games, a good display is essential. The Pegasus has one of the best we've seen. It's bright, and capable of displaying a clean white screen without any colour tint. The backlighting is even across the whole display and there's no sign of the grain that can spoil some screens. Our Doom 3 test looked superb, with loads of detail visible in darker areas.

The keyboard could do with more feedback, though the keys' size and depth of travel are good. The touch pad is accurate, and can be deactivated with a toggle switch, which is very useful for gamers or



typists who might accidentally brush it. There's a good range of ports around the chassis' edges. As well as three USB2 ports and FireWire, there's a memory card reader, optical S/PDIF audio output, and DVI port. Among the ports is a volume control dial, which is handier than using the usual keyboard short cuts. The speakers are fair for a notebook, but they lack bass and can sound a bit harsh.

You can store plenty of music on the 100GB hard disk, but 10GB of its space is filled by Windows Vista Home Premium. A few game installations and video files could see you quickly running out of space and at this price you'd reasonably expect a 120GB or 160GB disk.

This notebook is heavy to carry around every day, and you won't get far from the mains with its battery, which lasted for an appalling one hour and 29 minutes. It also gets rather hot underneath, even when idle, so it could be uncomfortable to use on your lap. It's a powerful computer, though, which comes with a three-year collect and return warranty. It's suitable for most tasks and for playing the odd game, but its poor battery life prevents it getting a higher score.

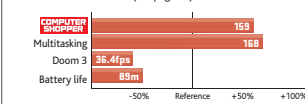
Seth Barton

SUMMARY

- ✓ Great display
- ✓ Fast in Windows and 3D
- ✗ Terrible battery life

NOTEBOOK 2.0GHz Intel Core 2 Duo T7200, 2GB RAM, 100GB hard disk, Nvidia GeForce Go 7600 graphics, DVD+/-RW +/-DL drive, 15.4in LCD widescreen, 3.0kg
SUPPLIER Rock Direct 08456 880556
DETAILS www.rockdirect.com

PERFORMANCE (see page 54)



Also consider...

SONY Vaio VGN-FE41E

★★★★★
£800 inc VAT and delivery

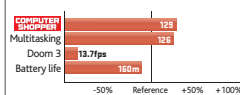


This Vaio was the first notebook we reviewed with Windows Vista Home Premium, which includes Media Center for easy media-file browsing. Its stylish chassis has clean lines and looks better than most for the money. The keyboard is unusual, with big flat keys, but they are well spaced and sensibly arranged.

Inside the case, a dual-core processor and 1GB of RAM will make short work of day-to-day tasks. There's a dedicated graphics chipset but it's not very fast, so you'll have to reduce detail levels to the minimum in modern games. There's a big 120GB hard disk on which to store all your files, and a wide range of quality pre-installed software for video and image editing.



NOTEBOOK 1.66GHz Intel Core 2 Duo T5500, 1GB RAM, 120GB hard disk, Nvidia GeForce Go 7400 graphics, DVD+/-RW +/-DL, 15.4in widescreen LCD
SUPPLIER www.play.com
DETAILS www.sony.co.uk
PART CODE VGN-FE41E
✓ Good Windows performance; stylish; comprehensive software bundle FULL REVIEW Apr 2007



At 2.8kg the Vaio VGN-FE41E is portable, and the battery lasted for an acceptable two hours and 40 minutes. It's a good notebook with a welcome dash of style and an impressive software bundle, and all for a decent price.

BYTE SIZE

XILENCE ATX PSU Tester with LCD Display

★★★★★
£30 inc VAT



If your PC refuses to start up, it's often hard to tell which component is at fault. One of the biggest problems is that a modern ATX power supply often won't switch on if there is something wrong with one of the other components, so it's hard to rule out a faulty PSU.

Xilence's ATX PSU Tester lets you know if your power supply has a problem. It has sockets for all the PSU's plugs, and its LCD tells you which voltage your +12V, +3.3V, +5V, -12V and +5Vsb rails are producing. As it measures the outputs only when your supply is at idle, the Xilence is no good for testing stability, but it will let you know if your PSU is broken.

Chris Finnamore

SUPPLIER www.quietpc.com
DETAILS www.xilencepower.com

SPECTEC miniSD WiFi card

★★★★★
£68 inc VAT



Spectec's miniSD WiFi card adds wireless networking to a mobile phone or PDA with a miniSD card slot. We tested it with a Windows Mobile 5 smartphone. After we had installed the driver, we found that the phone didn't always recognise the card when inserted, necessitating a reboot.

We had no trouble checking email, browsing the web and downloading attachments from anywhere within 15 metres of our WPA-protected access point, but it couldn't log on from a distance of 25 metres.

This card may prove useful if your smartphone or PDA doesn't already have WiFi, but it's expensive and supports only 802.11b.

Alan Lu

SUPPLIER www.expansys.com
DETAILS www.spectec.com.tw

CHOOSING A... Notebook Computer

Follow the steps to find your ideal specs

PROCESSOR: 1.6GHz Intel Celeron M 420
MEMORY: 512MB DDR
HARD DISK: 60GB
STORAGE: DVD rewriter
GRAPHICS: Integrated (shares system memory)
SCREEN: 15.4in widescreen 1,280x800 LCD
EXTRAS: Wireless networking
CONNECTORS: Three USB2, memory card reader
SOFTWARE: Windows Vista Home Premium
WEIGHT: 3kg
Recommended minimum in grey

1 The minimum specification of notebook we recommend, shown above in grey, is a good starting point when working out your ideal system. This is an average notebook that should cost around £600. It is not particularly powerful or, at 3kg, particularly portable.

2 Dual-core processors, such as Intel's Core 2 Duo range, can be much faster at many tough tasks. This is dependent on software support, but a lot of applications have now been optimised. Dual-core processors are widely available and often cost only a little more than their single-core equivalents.

3 Most notebooks come with 15.4in 1,280x800 widescreen displays, which are great for watching DVDs or TV. If you want a notebook for use around the home, especially for entertainment purposes, it's worth considering one with a larger 17in display. This will also have a higher native resolution of at least 1,440x900, giving you a bigger desktop. This makes it far easier to use complex applications, such as photo- or video-editing software.

4 A modem, 10/100 Ethernet port and wireless 802.11b/g networking (WiFi) should be fitted as standard, but there are also some other ports and connectors that you might want. FireWire (IEEE 1394) is common and useful for digital video enthusiasts. Bluetooth is handy for connecting to a mobile phone, but it's usually fitted only to more expensive business notebooks. Memory card readers are pretty much standard, but check that your camera or MP3 player's format is supported.

5 If portability is your main priority, look for notebooks with 12.1in displays.

Spending around £1,000 will get you an ultra-portable notebook that weighs under 2kg. Most of these notebooks are just as powerful as their larger counterparts, though some use slower, ultra-low voltage (ULV) processors to further increase battery life.

6 Some ultra-portables can attach to an optional docking station, which incorporates drives, ports and power, when you get home to your desk. It's the best of both worlds, but tends to be expensive. Others have separate DVD drives to help keep size and weight to a minimum.

7 If you're not swayed by ultra-portable chic, you can get a lot more for your money. Entertainment notebooks pile on the features but still keep the price under £1,200. You should expect a 17in widescreen display, hybrid TV tuner and a remote control.

8 There are features you can add to a notebook without increasing the weight or reducing battery life. A 120GB or 160GB hard disk will give you much more storage space, while 1GB of RAM will help you speed through tougher tasks. DVD rewriter drives are standard and will allow you to burn CDs and DVDs on your notebook.

9 Dedicated graphics let you play modern 3D games and are increasingly common on all but the cheapest or lightest notebooks. Look for an ATI Radeon Mobility X1600 or Nvidia GeForce Go 7600 chip as a minimum for getting smooth frame rates on the latest titles. Many notebooks use integrated graphics, which are fine for all other purposes, but use up system memory.

10 Once you're happy with your specification, start to shortlist some models you can afford. Check the weight, display size and battery life of each of them. If these are not acceptable, you need to reconsider your priorities and which features you really need.

